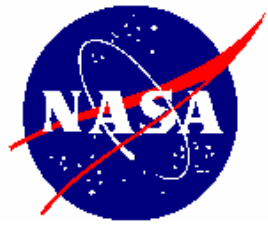




Stennis Space Center Safety, Medical and Environmental Health Overview

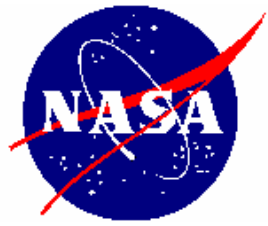
**NASA Safety and Health
Managers' Meeting
February 2, 2006**

Nick Cenci
Office of Safety and Mission Assurance
Stennis Space Center



Topics

- **Safety Program Element Status**
 - Management Commitment & Employee Involvement
 - Worksite Hazard Analysis
 - Hazard Prevention & Control
 - Training
- **Environmental Health Status**
 - Industrial Hygiene
 - Health Physics



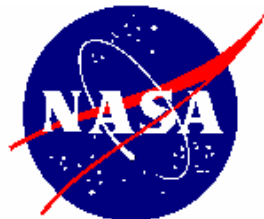
Management Commitment & Employee Involvement

- **SSC OSMA Roles**
 - **Develop and implement Safety, Reliability and Quality Assurance programs at SSC. Monitor contracted and in-house research, design and testing activities to ensure compliance with program requirements and directives.**
 - **Establish requirements, approve plans, assess implementation and recommend corrective action for safety, reliability and quality assurance tasks incorporated and accomplished on SSC procurements.**
 - **Participate in the development of both NASA wide and SSC policies governing operations at SSC.**
 - **Conduct evaluations on hardware and surveillance of test facilities activities at SSC.**
 - **Serve as the SSC focal point for overall Mission Assurance activities.**



Management Commitment & Employee Involvement

- **Safety Councils**
 - **Safety Management Council**
 - Chaired by the Center Director and has membership consisting of the General managers of all our on-site support contractors.
 - Meets monthly to share the corrective actions for all our respective incidents/close calls. They are reviewed for broader application within each of our contractors and NASA organizations. These are also distributed to line management in each of our attending organizations for broader distribution.
 - Safety Performance Highlight: recognizing a individual or team's safety performance
 - Special topics provide detailed look at area of emphasis.
 - Significant incidents, special safety initiatives and other activities such as our Safety Day.



Management Commitment & Employee Involvement

- **Safety Councils**
 - **Safety and Health Council**
 - Chartered to provide a opportunity for free safety and health dialogue between SSC organizations
 - Comprised by NASA, Residents Agencies, and Contractor Leadership
 - Focus on facility discrepancies, timely safety information, fire safety, and communication of pertinent safety information, and training
 - In existence for since 1989
 - <http://osma.ssc.nasa.gov/>



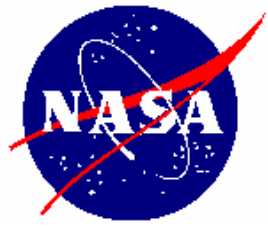
Management Commitment & Employee Involvement

- **Safety Councils**
 - **STARS (Striving To Achieve Real Safety)**
Employee's Safety Council
 - Chartered to provide the employee an opportunity to make an impact in site safety
 - Comprised by NASA and Contractor employees (mostly from a non-safety background)
 - Focus on whatever suits them. Past successes have been a safety video, and the share the road signs
 - Around for a little over a year
 - <http://stars.ssc.nasa.gov/>



Management Commitment & Employee Involvement

- **Awareness**
 - **Safety Day**
 - 4 hour stand down
 - Guest speakers
 - Training classes
 - Well received affair by all
 - **SSC Safety and Health Newsletter**
 - Quarterly
 - **Orbiter**
 - NASA Weekly with safety corner
 - **Lagniappe**



Worksite Hazard Analysis

- **Mishap Trending influencing mitigative efforts**
 - Deer Strikes
 - Insect Bites
 - PPE awareness
 - Vehicular Safety
- **Facility Inspection Database well populated**
 - Fire Department
 - Safety and Health
 - Results are placed on the SSC Facility Manager's DB
- **Inspections performed by FOS, NASA, Resident Agencies**



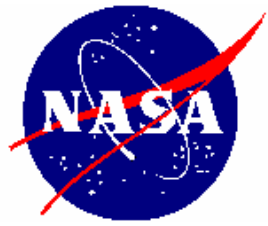
Worksite Hazard Analysis

- **FOS Safety/IH audit completed in June 2005**
 - **Team Approach with Safety and IH in concert**
 - **Construction Safety Program looking good**
 - **Improved inspection quality and database**
 - **Safety Plan review is improved**
 - **Improved contractor evaluation process with weekly construction meeting, more formal precons, and monthly status meetings**
 - **IH**
 - **IH sampling plan and survey in place**
 - **PPE assessments have improved**
 - **Respiratory Protection improved**
- **Close Call System in place and utilized**
- **Newly developed (FOS) database to assist in Hazard Analysis**



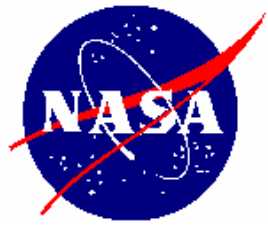
Hazard Prevention and Control

- **Emergency Preparedness – Real thing “Katrina”**
 - Laid waste to much of Gulf Coast
 - Sent five of the SSC OSMA staff to other NASA centers
 - All employees had damage to homes from total loss to loss of roofing, trees down
 - Damage the result of storm surge and high winds – anybody’s guess which came first
- **Fire/Emergency Service Program in place**
 - Given Katrina, Mutual Aide from surrounding communities just not there; recent visit from the President had SSC Fire providing standby at Stennis International Airport
 - First Response Facility redesigned/enlarged for full compliment of fire/security/medical personnel; clearing and grubbing and some foundation work complete
 - Facility maintenance issues regarding fire protection systems
 - Stand Pipe systems in disrepair (A&B Stand)
 - Occupancy classification of facilities



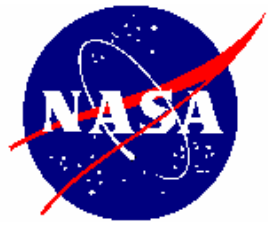
Training

- **Employee Safety Participation (ESP) behavior-based training was conducted by FOS**
- **Certification Board continues to meet**
 - **TCRS II System used as records database**
 - **Safety Subcommittee in place**
 - **Should allow for widespread input to system by managers, clinic, safety personnel**



Environmental Health

- Standards developed for Bloodborne Pathogens, Automated External Defibrillators, and Smoking
- Industrial Hygiene Committee meeting quarterly
- Good Medical Surveillance program
- Clinic still proactive in discerning noise related Hearing Standard Threshold Shifts
- Working through critical program personnel losses, Contract Lead IH and Radiation Safety POC have resigned. Efforts to backfill are ongoing.



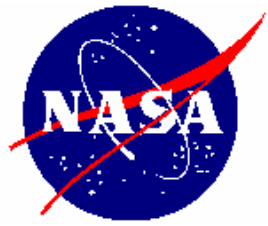
Environmental Health

- Visual inspection following full containment asbestos abatement jobs with field engineers and IH staff involvement
- NASA/SSC Ergonomics standard developed and in review
- Solid progress to implementing IH sampling plan



Katrina Recovery

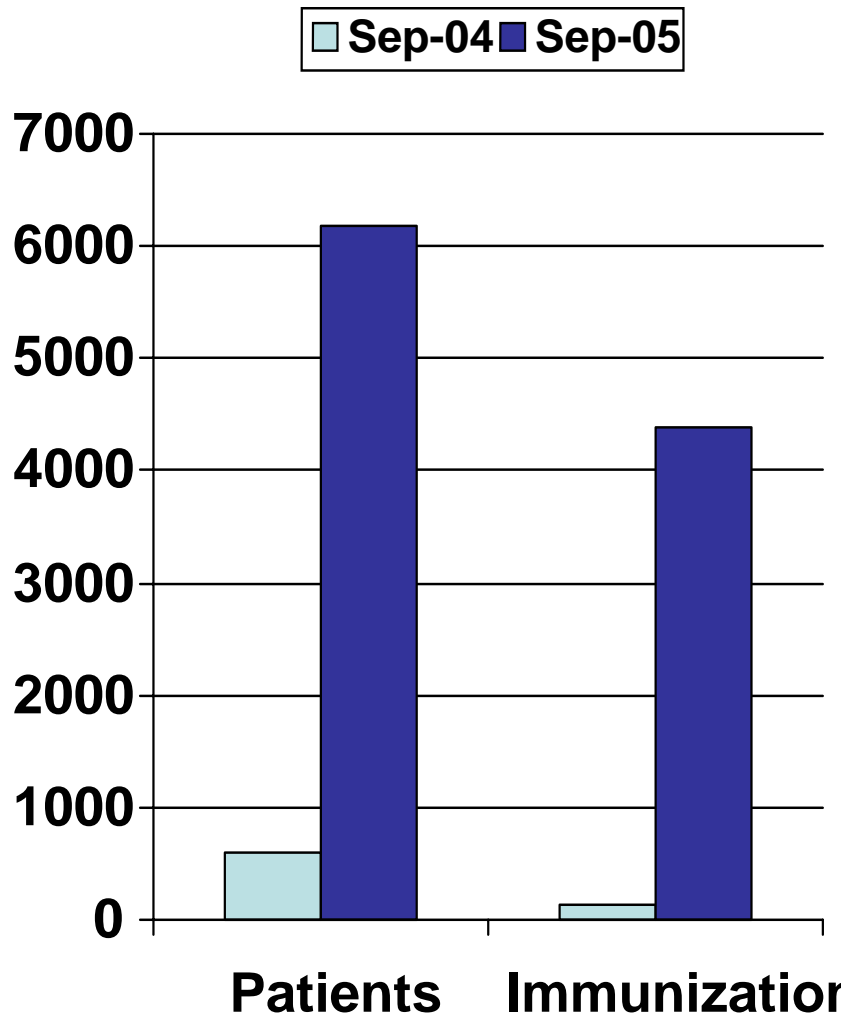
- Facility damage assessments
 - Over 240 assessments conducted to determine extent of facility and water damage
 - Identified potential mold & asbestos issues
 - Nine (9) NASA-owned buildings required mold remediation; six (6) completed as of 17 January 2006
- information and awareness training for SSC personnel
 - Chainsaw safety, mold awareness, respirator, fit tests...
 - Multimedia - SSC NASA TV, dedicated phone line, information booths, SSC website



Katrina Recovery

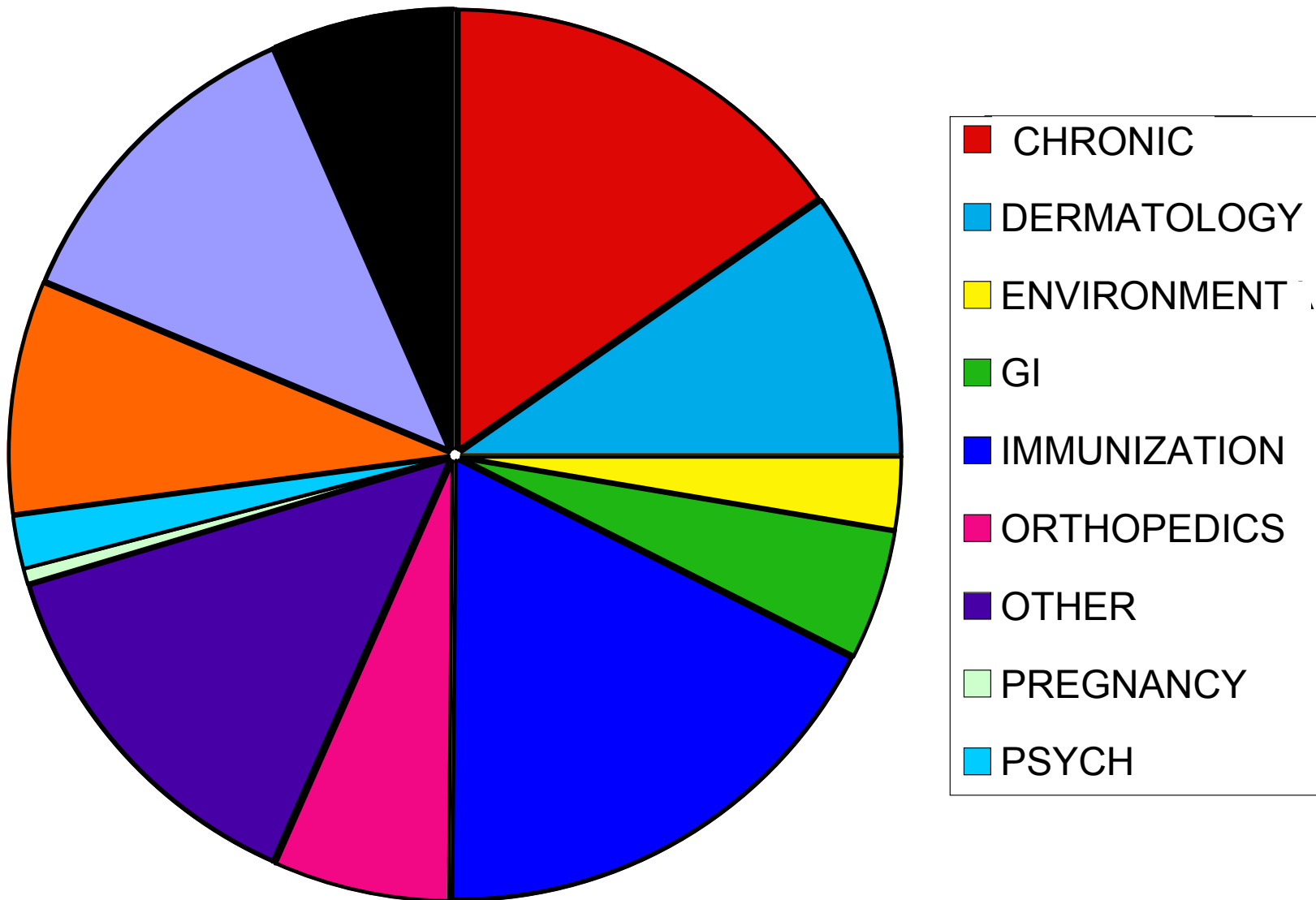
- Provided IH surveillance and personal protective equipment for post-hurricane recovery efforts
- Conducted public health surveys at SSC Shelters to ensure occupant safety and health
- Conducted numerous food service inspections to ensure compliance
- Surveyed radiation sources to ensure accountability
- Ensure safe drinking water quality

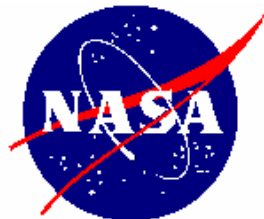
Clinic



- September 2004
 - Treated 599 patients, including 134 Immunizations
- September 2005
 - Treated 6,184 patients, including 4,380 Immunizations.

Statistical Data of Post Katrina Injuries/Illnesses Treated





Health Physics

- **SSC Radiation Safety Audits ongoing in February. Seven Agencies targeted.**
- **Health Physics actions from previous HQ IH/EH audit complete**
 - **Wipe test of sealed sources prior to transport**
 - **Procedures Update for emergency contact list, and additional info on physical inventory**
 - **Preventive Maintenance on X-Ray equipment improved**
- **Audit found, A “solid radiation safety program” supported by a “staff is knowledgeable and competent”**
- **And, that “SSC has made significant improvements since last evaluation in the formation of Radiation Safety Committee.” The committee “offers great opportunity for all SSC residents to be brought under the umbrella...”**



SSC Team*
21 Days
Without A Lost -
Time Incident

**Be alert with everything you do;
 Don't let hazards creep up on you.**

Approximately 150,846 Hours Without a SSC Team* Lost Workday

Latest FY 06 SSC Team* Restricted Duty (Type C)

On January 12, 2006, at building 2205 (Repair and Fabrication Shop), a component technician was removing a component from a shelf. There was a component stored next to the one being removed. The stored component had a thin gage metal tag riveted to it (manufacturer's tag). As the technician lifted the component from the shelf, the employee cut their right index finger on the metal tag. This resulted in the employee receiving a laceration. The employee reported to the SSC Medical Clinic and was put on restriction of no flexing their right index finger for the next 7-10 days. This became a restricted duty case on January 12, 2006.

Total FY 06 Team Lost Workday Cases 2

Resulting In 90 Lost Workdays (0.3 EP)

Corrective Action For Restricted Duty Case

A tool box talk was held in the Component Shop on 1-10-06 to discuss the incident. A team was formed to investigate the mishap and the results

Were presented to the SPRC committee on 1-20-06. TCSD is going to review this mishap with all crews and discuss wearing proper PPE (gloves)

When handling material. This will be accomplished by 2-3-06. The investigation team requested the following recommendations:

- Wear Mechanix gloves whenever possible when handling components.
- Ensure tags are safety wired instead of wedged into components.
- Update Hazard Analysis to include the use of gloves when handling components.
- Review mishap with affected crews.

Safety Strategic Management Council

Date: TBD

Time: TBD

Safety Training

APR Respirator User

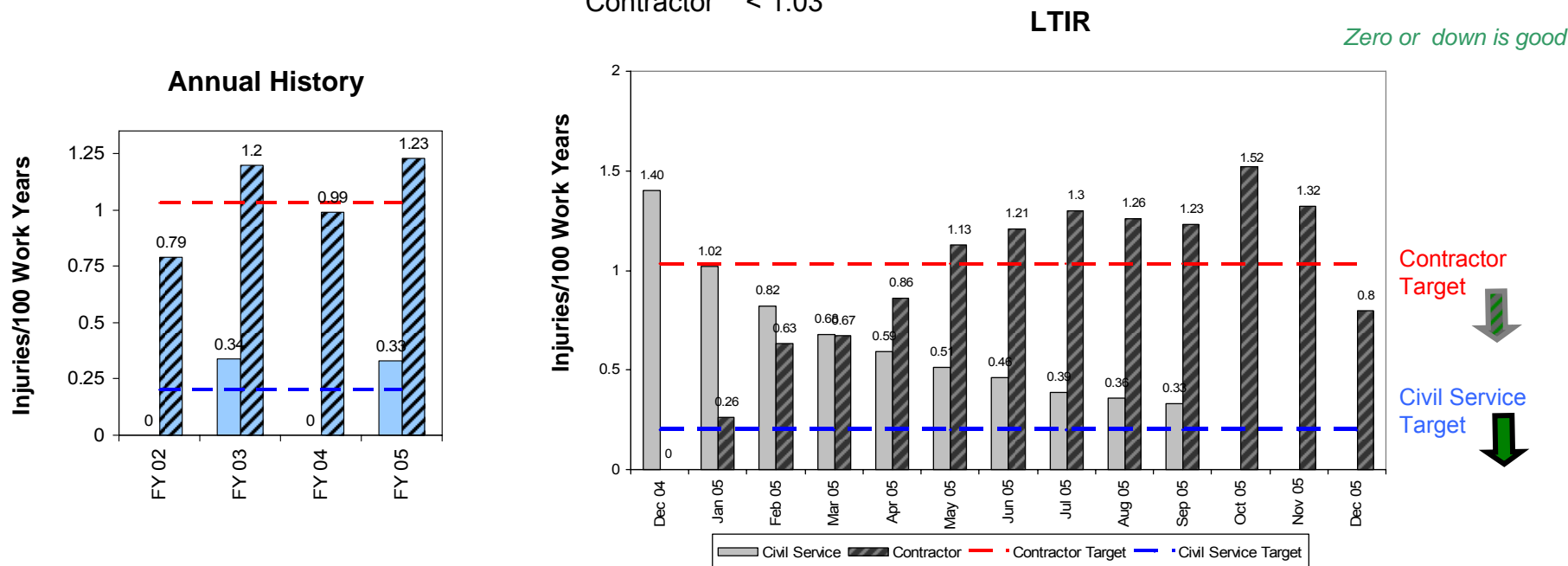
Lead Awareness

February 1

February 1

SSC Lost Time Injury Rate (LTIR) – Type C

LTIR Targets* - Civil Service < 0.2
Contractor < 1.03



- **LTIR for Civil Service = 0 injuries x 200k hours / 112.6k hours worked = 0.0 (within target)**

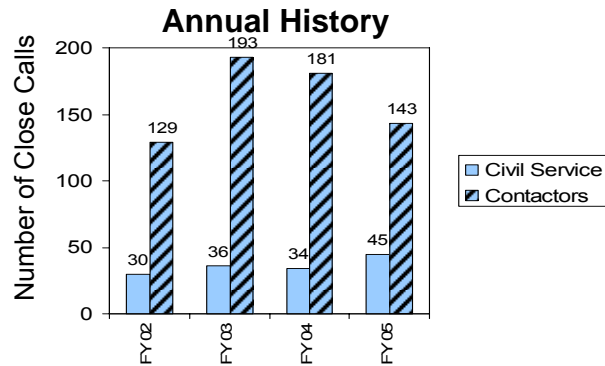
- December LTIR is 0, which is down compared to previous months.
- Annual history: LTIR is down compared to previous years
- December /2005: 0 lost time injuries; 44.6k hours worked
- FY 06: 0 lost time injury; 112.6k hours worked

- **LTIR for Contractor = 2 case x 200k hours / 502.6k = 0.80 (within target)**

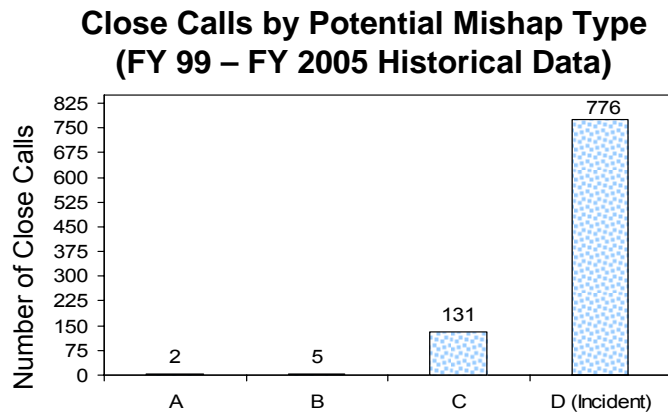
- December LTIR is 0.80, which is down compared to previous months.
- Annual history: LTIR is down compared to previous years
- December /2005: 0 lost time case; 198.5k hours worked
- FY 06: 2 lost time case; 502.6k hours worked

* LTIR target is based on a 10% reduction over the previous SSC 3 year average. The contractor LTIR tends to be higher than the civil service LTIR due to a higher potential for exposure to hazards..

SSC Close Calls *

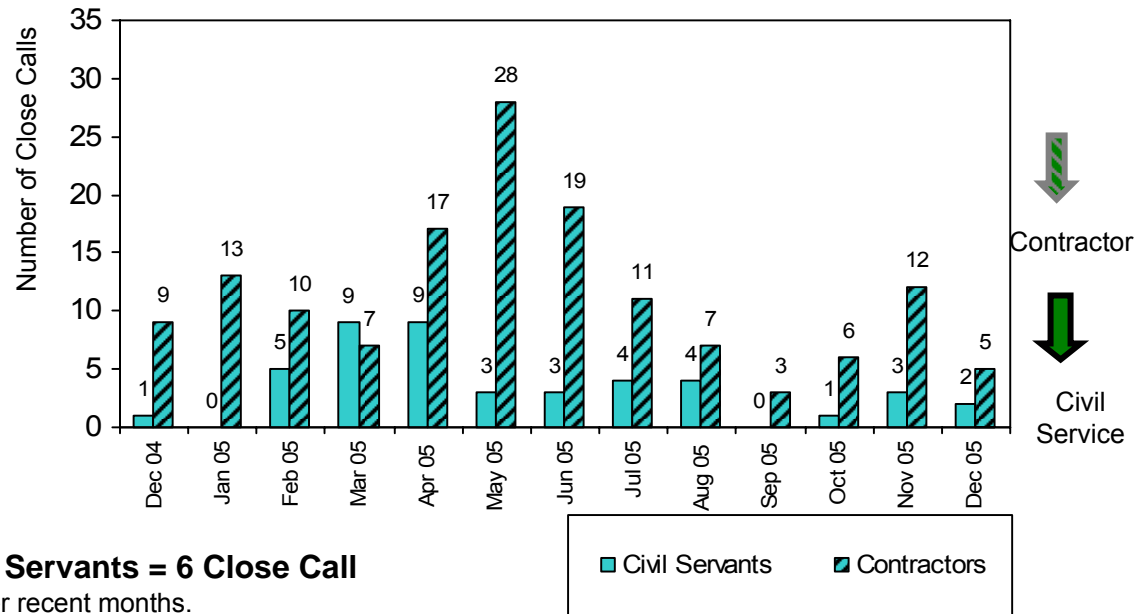


Close Calls Reporting Targets **
 Civil Service > Report All Close Calls
 Contractor > Report All Close Calls



Close Calls Reported

Up is good



- Number of Close Calls Reported by Civil Servants = 6 Close Call**

- December close call reporting was down over recent months.
- Annual history: Number of close calls reported is up over recent years
- December /2005: 2 close calls reported
- FY 06: 6 close call reported.

- Number of Close Calls Reported by Contractors = 23 Close Calls**

- December close call reporting was down over recent months
- Annual history: Number of close calls reported is down over recent years
- December /2005: 5 close calls reported
- FY 06: 23 close calls reported.

* Close Call: See Safety Metrics Information section

FY 05 YTD Lost Time Summary

As Of December 31, 2005

Date Of Injury	Organization	Mishap Description	Total Lost Days
1) 10/6/04	NASA	Back/Fell On Stairs	1
2) 1/3/05	Paragon	Back/Vehicle Accident	180 (7/1/05)
3) 2/11/05	MSS (Terminated)	Back/Lifting	83
4) 2/21/05	MSS	Back/Lifting	180 (8/19/05)
5) 3/9/05	Paragon	Broken Toe/Stumbled	5
6) 4/6/05	Paragon	Back/Tripped	180 (10/16/05)
7) 4/25/05	MSS	Knees/Strain	43
8) 5/2/05	MSS	Back/Strain	2
9) 5/12/05	DCMA	Knees/Fell	5
10) 6/2/05	MSS	Foot/Struck By	109
11) 6/8/05	Paragon	Back/Fell Out of Vehicle	180 (12/5/05)
12) 6/29/05	MSS	Toe/Insect Bite	17
13) 7/19/05	Sverdrup	Back/Fell Out of Chair	141 (*Rstr 9/27-11/30/05)
14) 7/20/05	MSS	Back/Fell	4
15) 8/8/05	DCMA	Ankle/Stumbled	20
16) 9/19/05	Sverdrup	Wrist/Fell	102 (*Rstr 10/1/05----

Cases highlighted in blue signify employees still out on leave or restricted duty.

NOTE: Per OSHA requirements, we do not count any lost work days past 180 days.

* Date Employee began restricted duty

FY 06 YTD Lost Time Summary

As Of December 31, 2005

Date Of Injury	Organization	Mishap Description	Total Lost Days .
1) 10/1/05 2) 11/22/05	MSS Sverdrup	Ankle, Calf, Knee/Struck By Back/Lifting	91 2 (*Restr. Only 11/28-11/30/05)

Cases highlighted in blue signify employees still out on leave.

NOTE: Per OSHA requirements, we do not count any lost work days past 180 days.

* Date Employee began restricted duty